



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/696,052	10/25/2000	Gerard Chauvel	TIF-29339	3869

23494 7590 11/30/2004

TEXAS INSTRUMENTS INCORPORATED
P O BOX 655474, M/S 3999
DALLAS, TX 75265

EXAMINER

CONNOLLY, MARK A

ART UNIT	PAPER NUMBER
----------	--------------

2115

DATE MAILED: 11/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/696,052

Applicant(s)

CHAUVEL ET AL.

Examiner

Mark Connolly

Art Unit

2115

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 August 2004.
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-24 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 25 October 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-24 have been presented for examination.
2. Applicant's arguments with respect to claims 1-24 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sunakawa et al¹ [Sunakawa] EP No 0683451A2 in view of Fujihara US Pat No 5894579.

5. Referring to claim 1, Sunakawa teaches the processor comprising a plurality of processing modules substantially including:

- a. calculating consumption information for a plurality of scenarios for executing a plurality of tasks, the consumption information of each scenario based on probabilistic values for activities associated with the tasks [Abstract].
- b. executing the tasks according to a selected scenario on said plurality of processing modules responsive to said consumption information [Abstract].

Although Sunakawa teaches calculating consumption information of scenarios and executing tasks associated with those scenarios according to the consumption information, Sunakawa does not explicitly teach that the tasks are scheduled for concurrent execution.

Art Unit: 2115

Fujihara teaches a means to control the execution of different scenarios comprising tasks scheduled for concurrent execution based on the tasks consumption information [fig. 7 and col. 3 line 56- col. 4 line 16]. Because the read and write commands for the FD, CD-ROM and HD control the actual devices themselves, it is interpreted that a plurality of tasks must be scheduled for concurrent execution since for example, reading or writing to a FD, CD-ROM and HD requires at least the tasks of spinning the disk and writing and/or retrieving data from the disk. It would have been obvious to one of ordinary skill in the art at the time of the invention to include the teachings of Fujihara into the Sunakawa system because Sunakawa explicitly teaches the need to “calculate[s] a total consumption power of devices used by each task” [page 16 lines 3-4] and Fujihara further teaches a means to calculate and manage power consumption for tasks requiring disk access.

6. Referring to claim 2, Sunakawa teaches monitoring the actual activity occurring and modifying the execution of tasks based on the monitoring step [Abstract].
7. Referring to claim 3, Sunakawa teaches providing maximum performance within thermal constraints [page 3 lines 45-50 and page 15 line 56 – page 16 line 9].
8. Referring to claim 4, Sunakawa teaches executing the tasks on a plurality of processing modules responsive to said consumption information in order to execute the tasks using the lowest possible energy consumption [Abstract and page 4 lines 28-30].
9. Referring to claim 5, Sunakawa teaches:
 - a. generating a task allocation scenario [page 9 lines 7-28 and figs 7, 8A and 8B].

¹ As cited by the applicant

Art Unit: 2115

- b. estimating the activities for task allocation scenario [Abstract, page 9 lines 7-28 and figs 7, 8A and 8B]. The usage of devices in each task are interpreted as activities.
 - c. computing the consumption associated with said activities [Abstract, page 9 lines 7-28 and figs 7, 8A and 8B].
8. Referring to claim 6, Sunakawa teaches receiving a task list describing the tasks to be executed and a task model describing the tasks [page 9 lines 7-28 and figs 7, 8A and 8B].
9. Referring to claim 7, Sunakawa teaches including initial estimates for each task [page 9 lines 7-28 and figs 7, 8A and 8B].
10. Referring to claim 8, Sunakawa teaches priority constraints for each task [Abstract and page 9 lines 29-32 and figs. 7 and 8C].
11. Referring to claim 9, Sunakawa teaches including information regarding possible degradations associated with one or more of the tasks in the task list [page 3 lines 34-41]. Priority is interpreted as information regarding possible degradations.
12. Referring to claim 10, Sunakawa teaches computing the energy consumption associated with the activities [page 4 lines 39-42]. Average power and energy are interpreted to be the same since both describe power over a given time period.
13. Referring to claim 11, Sunakawa teaches computing the power consumption associated with the activities [Abstract].
14. Claims 12-22 are the apparatus claims which follow the methods of claims 1-12 and are therefore rejected on the same basis as set forth hereinabove.
15. Claim 23 is drawn to the methods of claims 1, 5-6 and 9 and is therefore rejected on the same basis as set forth hereinabove.

Art Unit: 2115

16. Claim 24 is drawn to the methods of claims 12, 16-17 and 20 and is therefore rejected on the same basis as set forth hereinabove.

Conclusion

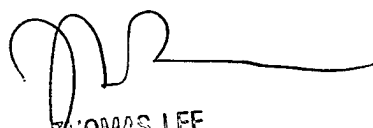
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Connolly whose telephone number is (571) 272-3666. The examiner can normally be reached on M-F 8AM-5PM (except every first Friday).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas C Lee can be reached on (571) 272-3667. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mark Connolly
Examiner
Art Unit 2115

mc
November 20, 2004


THOMAS LEE
SUPERVISOR, PATENT EXAMINER
TECHNOLOGY CENTER 2100